

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

Applicant:	Paul A. Farrar	Examiner:	DiLinh Nguyen
Serial No.:	09/259,849	Group Art Unit:	2814
Filed:	March 1, 1999	Docket:	303.557US1
Confirmation No.:	5766		
Title:	CONDUCTIVE STRUCTURES IN INTEGRATED CIRCUITS		

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**INFORMATION DISCLOSURE STATEMENT**

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

In compliance with the duty imposed by 37 C.F.R. § 1.56, and in accordance with 37 C.F.R. §§ 1.97 *et. seq.*, the enclosed materials are brought to the attention of the Examiner for consideration in connection with the above-identified patent application. Applicant respectfully requests that this Information Disclosure Statement be entered and the documents listed on the attached PTO 1449 Form be considered by the Examiner and made of record. Pursuant to the provisions of MPEP 609, Applicant requests that a copy of the PTO 1449 Form, initialed as being considered by the Examiner, be returned to the Applicant with the next official communication.

Pursuant to 37 C.F.R. § 1.97(b), it is believed that no fee or statement is required with the Information Disclosure Statement.

Applicant brings to the attention of the Examiner the following Office Actions and responses associated with one or more of the inventors of the instant application and/or the assignee of the instant application. This material is available and accessible at the United States Patent and Trademark Office.

**METHODS FOR MAKING COPPER AND OTHER METAL INTERCONNECTIONS IN INTEGRATED CIRCUITS**

Application No. 09/032,197, Response filed 11-18-99 to Restriction Requirement mailed 11-5-99, 2 pgs  
Application Serial No. 09/032,197, Non Final Office Action mailed 12-16-99, 7 pgs  
Application Serial No. 09/032,197, Response filed 03-16-2000 to Non Final office action mailed 12-16-1999, 1 pg  
Application No. 09/032,197, Non Final Office Action mailed 04-18-00, 5 pgs  
Application Serial No. 09/032,197, Non Final Office Action mailed 04-18-00, 6 pgs  
Application Serial No. 09/032,197, Response filed 07-18-00 to Non Final Office Action mailed 04-18-00, 5 pgs  
Application Serial No. 09/032,197, Notice of Allowance mailed 10-03-00, 6 pgs

Application No. 09/032,197, Notice of Allowance mailed 10-03-00, 6 pgs  
Application No. 09/032,197, Non Final Office Action mailed 11-18-00, 8 pgs  
Application No. 09/032,197, Response filed 3-16-00 to Non Final Office Action mailed 12-16-99, 2 pgs  
Application No. 09/032,197, Response filed 7-18-00 to Non Final Office Action mailed 4-18-00, 6 pgs  
Application No. 09/032,197, Restriction Requirement mailed \_\_\_\_, 4 pgs

#### **COPPER METALLURGY IN INTEGRATED CIRCUITS**

Application Serial No. 09/128,859, Non Final Office Action mailed 07-19-00, 5 pgs  
Application Serial No. 09/128,859, Response filed 12-19-2000 to Non final office action mailed 07-19-2000, 7 pgs  
Application Serial No. 09/128,859, Notice of Allowance mailed 03-13-01, 4 pgs  
Application Serial No. 09/128,859, 312 Amendment filed 06-13-01, 2 pgs

#### **INTEGRATED-CIRCUIT WITH OXIDATION-RESISTANT POLYMERIC LAYER**

Application Serial No. 09/145,012, Response filed 12-18-98 to Restriction Requirement mailed 11-18-98, 5 pgs  
Application Serial No. 09/145,012, Restriction Requirement mailed 01-11-99, 4 pgs  
Application Serial No. 09/145,012, Response filed 02-11-99 to Restriction Requirement mailed 01-11-99, 10 pgs  
Application Serial No. 09/145,012, Non Final Office Action mailed 06-08-99, 6 pgs  
Application Serial No. 09/145,012, Restriction Requirement mailed 11-29-99, 4 pgs  
Application Serial No. 09/145,012, Response filed 12-29-99 to Restriction Requirement mailed 11-29-99, 3 pgs  
Application Serial No. 09/145,012, Final Office Action mailed 01-27-00, 6 pgs  
Application Serial No. 09/145,012, Response filed 03-28-2000 to Final office action mailed 01-27-2000, 6 pgs  
Application Serial No. 09/145,012, Advisory Action mailed 04-07-00, 2 pgs  
Application Serial No. 09/145,012, Non Final office action mailed 07-05-00, 5 pgs  
Application Serial No. 09/145,012, Response filed 10-05-2000 to Non Final office action mailed 07-05-2000, 3 pgs  
Application Serial No. 09/145,012, Notice of allowance mailed 01-02-01, 5 pgs  
Application Serial No. 09/145,012, Notice of Allowance mailed 01-02-01, 4 pgs  
Application Serial No. 09/145,012, Restriction Requirement mailed 11-18-98, 5 pgs

#### **FORMING SUBMICRON INTEGRATED-CIRCUIT WIRING FROM GOLD, SILVER, COPPER AND OTHER METALS**

Application Serial No. 09/256,123, Preliminary Amendment filed 02-24-99, 1 pg  
Application Serial No. 09/256,123, Non Final Office Action mailed 06-21-00, 5 pgs  
Application Serial No. 09/256,123, Response filed 10-23-2000 to Non Final office action mailed 06-21-2000, 5 pgs  
Application Serial No. 09/256,123, Notice of allowance mailed 11-06-00, 4 pgs

#### **FORMING SUBMICRON INTEGRATED-CIRCUIT WIRING FROM GOLD, SILVER, COPPER AND OTHER METALS**

Application Serial No. 09/256,124, Preliminary Amendment filed 02-24-99, 1 pg  
Application Serial No. 09/256,124, Non Final Office Action mailed 07-20-1999, 7 pgs  
Application Serial No. 09/256,124, Response filed 10-20-1999 to Non Final office action mailed 07-20-1999, 6 pgs  
Application Serial No. 09/256,124, Final Office Action mailed 01-13-00, 7 pgs  
Application Serial No. 09/256,124, Response filed 03-13-2000 to Final office action mailed 01-13-2000, 5 pgs  
Application Serial No. 09/256,124, Advisory Action mailed 04-11-00, 2 pgs  
Application Serial No. 09/256,124, Response filed 05-17-00 to Advisory Action mailed 04-11-00, 5 pgs

Application Serial No. 09/256,124, Notice of allowance mailed 09-25-00, 6 pgs

#### **CONDUCTIVE STRUCTURES IN INTEGRATED CIRCUITS**

Application Serial No. 09/259,849, Advisory Action mailed 04-29-03, 4 pgs

#### **FORMING SUBMICRON INTEGRATED-CIRCUIT WIRING FROM GOLD, SILVER, COPPER, AND OTHER METALS**

Application Serial No. 09/789,091, Non-Final Office Action mailed 11/21/02, 16 pgs

Application Serial No. 09/789,091, Non Final Office Action mailed 11-21-02, 6 pgs

Application Serial No. 09/789,091, Response filed 02-21-03 to Non Final office action mailed 11-21-2002, 9 pgs

Application Serial No. 09/789,091, Non Final office action mailed 05-30-2003, 4 pgs

Application Serial No. 09/789,091, Response filed 09-02-2003 to Non Final office action mailed 05-30-2003, 3 pgs

Application Serial No. 09/789,091, Non Final Office Action mailed 12-01-03, 5 pgs

Application Serial No. 09/789,091, Response filed 03-01-2004 to Non Final office action mailed 12-01-2003, 9 pgs

Application Serial No. 09/789,091, Final Office Action mailed 05-18-04, 5 pgs

Application Serial No. 09/789,091, Response filed 08-18-2004 to Final office action mailed 05-18-2004, 4 pgs

Application Serial No. 09/789,091, Notice of allowance mailed 09-20-04, 5 pgs

Application Serial No. 09/789,091, Preliminary Amendment filed 02-20-01, 7 pgs

#### **METHODS FOR MAKING COPPER AND OTHER METAL INTERCONNECTIONS IN INTEGRATED CIRCUITS**

Application Serial No. 09/817,447, Non final office action mailed 10-23-01, 5 pgs

Application Serial No. 09/817,447, Response filed 1-23-2002 to Non final office action mailed 10-23-2001, 10 pgs

Application Serial No. 09/817,447, Final Office Action mailed 05-06-02, 7 pgs

Application Serial No. 09/817,447, Response filed 07-08-2002 to Final office action mailed 05-06-2002, 5 pgs

Application Serial No. 09/817,447, Notice of Allowance mailed 01-27-05, 9 pgs

Application Serial No. 09/817,447, Preliminary Amendment filed 03-26-01, 1 pg

#### **COPPER METALLURGY IN INTEGRATED CIRCUITS**

Application Serial No. 09/946,055, Preliminary Amendment filed 9-4-01, 1 pg

Application Serial No. 09/946,055, Non Final Office Action mailed 02-26-02, 7 pgs

Application Serial No. 09/946,055, Response filed 05-28-2002 to Non Final Office Action mailed 02-26-2002, 7 pgs

Application Serial No. 09/946,055, Notice of Allowance mailed 07-15-02, 7 pgs

Application Serial No. 09/946,055, Notice of Allowance mailed 11-13-02, 10 pgs

Application Serial No. 09/946,055, Notice of allowance mailed 03-21-03, 8 pgs

#### **INTEGRATED CIRCUIT AND SEED LAYERS**

Application Serial No. 10/117,041, Restriction Requirement mailed 09-20-02, 4 pgs

Application Serial No. 10/117,041, Response filed 10-21-02 to Restriction Requirement mailed 09-20-02, 1 pg

Application Serial No. 10/117,041, Non Final Office Action mailed 12-16-02, 11 pgs

Application Serial No. 10/117,041, Response filed 03-17-03 to Non Final Office Action mailed 12-16-02, 16 pgs

Application Serial No. 10/117,041, Non Final Office Action mailed 06-06-03, 16 pgs

Application Serial No. 10/117,041, Response filed 09-08-03 to Non Final Office Action mailed 06-06-03, 22 pgs

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Application Serial No. 10/117,041, Notice of Allowance mailed 12-11-03, 8 pgs  
Application Serial No. 10/117,041, Notice of Allowance mailed 06-01-04, 6 pgs  
Application Serial No. 10/117,041, Notice of Allowance mailed 01-26-05, 6 pgs  
Application Serial No. 10/117,041, Non Final Office Action mailed 10-17-05, 15 pgs  
Application Serial No. 10/117,041, Response filed 01-17-06 to Non Final Office Action mailed 10-17-05, 14 pgs  
Application Serial No. 10/117,041, Notice of Allowance mailed 04-07-06, 6 pgs  
Application Serial No. 10/117,041, Partial Prosecution History, 324 pgs

**CONDUCTIVE STRUCTURES IN INTEGRATED CIRCUITS**

Application Serial No. 11/216,693, Non Final Office Action mailed 04-20-2006, 15 pgs  
Application Serial No. 11/216,693, Response filed 08-21-2006 to Non Final Office Action mailed 04-20-2006, 23 pgs  
Application Serial No. 11/216,693, Final Office Action mailed 11-06-2006, 13 pgs  
Application Serial No. 11/216,693, Response filed 01-08-2007 to Final Office Action mailed 11-06-2006, 32 pgs  
Application Serial No. 11/216,693, Advisory Action mailed 01-30-2007, 3 pgs  
Application Serial No. 11/216,693, Non Final Office Action mailed 05/08/2007, 14 pgs  
Application Serial No. 11/216,693, Response filed on 08/08/2007 to Non-Final Office Action mailed 05/08/2007, 22 pgs  
Application Serial No. 11/216,693, Response filed 10/31/2007 to Final Office Action mailed 10/16/2007, 24 pages  
Application Serial No. 11/216,693, Non-Final Office Action mailed 1-25-08, 15 pgs  
Application Serial No. 11/216,693, Response filed 4/25/2008 to Non-Final Office Action mailed 01/25/2008, 29 pgs  
Application Serial No. 11/216,693, Final Office Action mailed 08-01-08, 12 pgs  
Application Serial No. 11/216,693, Response filed 10/01/2008 to Final Office Action mailed 08/01/2008, 31 pages  
Application Serial No. 11/216,693, Response filed 11/26/2008 to Advisory Action mailed 10/29/2008, 30 pages  
Application Serial No. 11/216,693, Non-Final Office Action mailed 02/02/09, 13 pgs

Pursuant to 37 C.F.R. § 1.98(a)(2), copies of cited U.S. Patents and Published Applications, and Non-Published Applications identifiable by USPTO Serial Number, are no longer required to be provided to the Office. Applicant acknowledges the requirement to submit copies of foreign patent documents and non-patent literature in accordance with 37 C.F.R § 1.98(a)(2).

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The Examiner is invited to contact the undersigned at the telephone number indicated if there are any questions regarding this communication.

Respectfully submitted,

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Date APRIL 24, 2012

By

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